

A BIOREACTOR TANK INTERNALLY CHAMBERED TO SEQUENTIALLY PERFORM BIOLOGICAL TREATMENT AND MEMBRANE FILTRATION

ABSTRACT OF THE DISCLOSURE

Wastewater is delivered to a single tank of a bioreactor system to undergo biological treatment. After undergoing such biological treatment, the wastewater is centrifugally separated outside the tank into contaminated portions with lowered and increased concentration of solids therein to respectively undergo filtration within a small volume chamber of the tank and continuous return to a large volume chamber for biological retreatment during operation of the bioreactor system. Under different conditions of the wastewater delivered to the tank, one of the separated portions of the biologically treated wastewater is disposed of by direct discharge in bypass relation to the small chamber when delivery thereof into the small chamber is interrupted under selective valve control.